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# United States Department of Agriculture,

BUREAU OF PLANT INDUSTRY,

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WASHINGTON, D. C.

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## FAMILIAR TALKS ON FARMING.

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### CULTIVATION OF THE CROP.

One day last spring I called on Uncle John and we went into the field to see his cotton and corn.

Uncle John is a fine, old, conservative farmer, as good and true as men are made, but he can not help looking at things just as he did when he was a boy, and when he was a boy farming was done with the plow and the hoe run by hard muscle. No one ever thought of attaching brains to them. As we entered the field Uncle John remarked, "You see my stand is not as good as I wanted. I planted a full bushel of seed and a little thrown in extra. It was good cotton seed; I got it from the gin and the plants came up thick enough in most places to raise the crust, but in some places they did not come up at all. A good many of the plants died, though I gave the crop a good hoeing and kept the grass out. I believe in clean cultivation, and for this there is no implement that quite equals the hoe."

"My dear Uncle," I replied, "you are worth your weight in gold and if you would change some of your old methods of raising cotton you would soon make enough money to buy yourself and retire from business.

"In view of this unpromising crop I want to tell you several things that will be helpful. The world knows a lot more about plant life than it did twenty-five years ago.

"Your first mistake was that you did not thoroughly prepare this land for planting. It should have been worked until the soil was like an ash heap, 3 or 4 inches deep. You did not drain the rows so that there would be no wet spots, even with a heavy rain. Look at the long spaces where there are no plants. If the soil is properly prepared there is little danger that there will not be moisture enough for the seeds to germinate, but in most climates and soils there is always danger of too much water in the soil. Standing water is death to cotton and corn.

"Your next mistake was in getting gin-run seed and planting too many per acre. If you wanted a clean, vigorous, and thrifty family, you would not go and get a lot of gin-run boys and girls."

“What do you mean by ‘gin-run boys and girls?’” rather sharply interposed Uncle John.

“I mean,” I replied, “boys and girls picked up in the homes of the orphans, without any knowledge of their parentage, and you would not get five times as many as you intended to raise, judging that enough of them would die of natural weakness or consumption or from other causes to leave the proper family. Yet that is what you did with your cotton; but we will talk more of this another time.

“You planted too deep and there was hardly strength enough in the little plant to reach the air and it died before it could draw support from the soil. The plants were in the main too crowded. They lacked food and air. That crust on the soil should have been broken. It shuts out the air essential to germination and growth and aids evaporation. Delay planting till the weather is warm. Cotton is a tropical plant. Prepare a fine seed bed; plant shallow—not over 1 inch deep, if that depth reaches moisture—and the plants will be up in a few days.

“Run the smoothing harrow two or three times diagonally across the rows as soon as the seed is planted and again when the plants are 2 or 3 inches tall. This should be repeated, removing a tooth from the harrow and going astride the rows, as in cultivation, till the plants are 6 inches high. The harrow prunes the roots a little, which tends to give the plant a lower and ‘limbier’ habit of growth; it opens the soil to receive air; it promotes growth and destroys weeds.

“The hoe is the natural enemy of the cotton planter. It kills some weeds, but it finally kills the planter financially, and as generally used it does not properly air the soil, which is the chief end of cultivation.

“While the cotton plants are small, thoroughly work the spaces between the rows two or three times to a depth of at least 4 inches. This leaves a fine seed bed for the roots to occupy later when they are racing about to find food and water. All later cultivation of plants and middles should be shallow—not over an inch and a half deep. This keeps a dust mulch, which checks the rising soil moisture and plant food just at a depth where there are the most rootlets to utilize them for plant growth.

“A plow is the poorest implement with which to work a cotton crop that could well be used.”

“Tut! tut!” said Uncle John. “What you said about the hoe was bad enough and now you jump on to the plow. I have used it all my life and it is a pretty good tool.”

“Yes, you have used it all your life and you have not averaged a third of a bale of cotton per acre in all that period, when on such good land you should have averaged a bale. At present prices this is a yearly loss of \$40 per acre, lint and seed included. You have 200 acres in cotton; your loss is \$8,000 per year. You have been repeating this for forty years. Your losses, even at the lower prices of cotton in

former years, have for that period exceeded \$200,000. What have you to show for it? Some old plows and antiquated hoes; if they have not kept you poor, they have prevented you from getting ahead. There is nothing on a farm that pays greater dividends than the best teams and tools.

“Shallow cultivation should be continued as late as practicable. On very rich bottom lands after the plants are thinned to a stand, bar off on each side if they show too rapid growth. This root-prunes and checks a tendency to make excessive stalk. It also gives the plant a hint that it must commence fruiting.

“What I have said about cotton is true of corn, only corn requires a deeper seed bed than cotton and different spacing for the plants. The cultivation is practically the same, though local conditions of soil and climate may require considerable modification in the treatment of the corn plant. The experience of the best farmers must determine this.”

S. A. KNAPP,  
*Special Agent in Charge.*

Approved:

B. T. GALLOWAY,  
*Chief of Bureau.*

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